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SAFETY RULES

MILITARY RAILWAY SERVICE, U. S. ARMY

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This Safety Rule Book is issued to:

Rank	Name	ASN	Position

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BY ORDER OF THE SECRETARY OF WAR:

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GENERAL NOTICE

Safety Rules have been established governing the personnel of the U. S. Army Military Railway Service. These rules are for the protection of personnel, as well as for the safeguarding of Government property. Officers and other supervisory personnel will make periodic checks to see that these rules are strictly enforced, and will report any violations promptly to the proper authority.

In any situation not specifically covered by a safety rule, Military Railway Service personnel will keep in mind the necessity of extreme caution in the performance of their duties.

Every member of the Military Railway Service will familiarize himself with these rules and obey them.

GENERAL RULES

1. Personnel are responsible for their own safety and will not depend upon others to apply the rules of safety for them.

2. Inexperienced personnel must be properly instructed as to the safe method of performing their work.

3. Personnel will familiarize themselves with tools, appliances, and equipment before use, making certain their condition is safe.

4. Personnel will not cross, sit, or lie under cars, except in performance of duty, and then only when proper protection is afforded.

5. When crossing between cars, the ladder will be used when clearances and conditions permit. The coupler will not be used for this purpose.

6. Personnel will look in both directions before crossing, walking parallel to, or standing close to tracks. Walk clear of tracks when duties permit, and walk against the current of traffic Keep a lookout in both directions for approaching trains or cars.

7. Personnel will not pass between, or cross tracks close to, standing cars or engines, without first making certain it is safe.

8. Personnel will not step or walk on rails, frogs, switches, or interlocking machinery, except when necessary in the performance of duty.

9. Personnel will maintain sufficient distance from passing engines or cars to avoid injury from falling objects or from projections on equipment.

10. Material will not be placed close to or between tracks, but must be moved to a site where safety is assured.

11. Personnel entering or leaving camp or outfit cars will use the opposite end or side from the main track.

12. Flagging equipment will be used only by authorized personnel except in an emergency.

13. Care will be exercised to avoid injury from protruding nails. When practicable, nails should be bent down or removed.

14. Barriers and warning signals will be used after removing covers from drop pits, manholes, or other openings.

15. Personnel will not use hammer, maul, pick, etc., without sufficient room except in cases of emergency.

16. Personnel will not ride on cranes or attached idler cars except in the performance of duty, and then only after a proper understanding with the crane operator.

17. Crossing over coal conveyors, ash disposal belts, or other conveying apparatus is prohibited.

18. Every precaution will be taken to prevent fires.

19. Do not hold a torch (except electric), open light, or heated object near a gas tank, reservoir, container, or storage battery.

20. Extreme caution will be exercised in the proper disposal of waste and inflammable material.

21. Personnel will keep sufficiently covered as a protection against burns.

22. Personnel will wear goggles or protective glasses on all operations hazardous to the eyes.

23. Dangling wires will be avoided. If it becomes necessary to handle a dangling wire use a nonconducting substance, or secure qualified assistance.

24. Personnel will use care to avoid accidents from—

a. Being cut by sharp edges of iron, pipe, wire, nails, etc.

b. Shifting or falling material.

c. Hands being caught between truck handles, doorways, materials, etc.

d. Trucks and trailers colliding, or striking persons or objects.

e. Upsetting truck.

f. Coupling or uncoupling engines, cars, trucks, tractors, or trailers.

g. Being struck by any moving equipment.

h. Material being hoisted or lowered.

i. Getting splinters or nails in hands or feet.

j. Tools being used by others.

k. Excessive strain from lifting, etc.

l. Being caught in shop machinery, belts, shafts, etc.

m. Coming in contact with live electrical wires.

n. Improper air hose connections, and defective pneumatic tools.

o. Flying spawls, cuttings, etc.

25. Trespassing by unauthorized persons on Military Railway Service property is prohibited. Offenders will be turned over to the proper authority.

26. Personnel will secure foot and hand hold whenever possible.

27. "Horseplay" of any kind is prohibited.

28. The use of compressed air to blow dirt from clothes is prohibited.

29. Ear coverings which interfere with hearing while working on or about tracks, will not be worn.

30. Personnel will observe closely all cars to detect doors out of order, projections from sides of cars, etc. Improper conditions must be corrected, if possible; otherwise, a report will be made to the proper authority.

TRAIN, ENGINE, AND YARD PERSONNEL

I. COUPLING OR UNCOUPLING ENGINES OR CARS, AND WORK INCIDENT THERETO.

31. Before passing between standing engines or cars personnel will—

a. Give hand or lamp stop signal and wait for acknowledgment, unless a clear understanding has been had with the engineer as a protection against an unexpected movement.

b. Wait until slack has adjusted.

c. Be sure that cars on a grade are secured.

32. No signal will be given to move an engine or a car while a person is between cars, or engine and cars.

33. The lever will be used to uncouple cars. If the lever is inoperative, a clear understanding with proper personnel will be obtained before lifting the pin by any other means.

34. The use of the finger in the hole at the bottom of the coupler to adjust lock pin is prohibited.

35. Personnel will not step in front of moving engines or cars to adjust drawbar, knuckle, or lock pin.

36. No attempt will be made to adjust drawbar, knuckle, or lock pin when engines or cars are about to come together.

37. Personnel will keep clear of track, and face moving engines or cars when making a coupling.

38. Giving a signal to stop, and then stepping on the track between or in front of engines or cars before such movement is completed, is prohibited.

39. Before uncoupling the air hose by hand, personnel will—

a. Have both angle cocks on the air line closed.

b. Have firm grip on hose with both hands.

c. Gradually break the connection, if possible, to reduce the pressure remaining in the hose.

40. Uncoupling the air hose on lines having angle cocks clamped open, before the pressure has been depleted, is prohibited. The hose will be uncoupled with the hands or authorized tools.

41. Before reducing the brake pipe pressure with the angle cock, a position clear of the hose will be taken or the hose will be held firmly to prevent it from flying around.

42. Manipulating angle cocks on moving engines, trains, or cabin cars, without use of special equipment for the purpose, except in an emergency, is prohibited.

43. Before uncoupling a steam connection, personnel will—

a. Close valves on both sides of the joint.

b. Relieve the pressure by bleeding the gravity traps on the coupler heads, so equipped.

c. Relieve the pressure by tapping on the under side of the head on those *not* equipped with gravity traps.

d. Keep the body clear of the joint until uncoupling is completed.

44. When removing steam connection from carrying chain on rear of tender or car, keep hands and other parts of body clear of end of connection in order to avoid burns from hot water that may have accumulated in the lower parts of connection.

45. Personnel will not lean or reach beyond the clearance line of moving passenger cars to operate steam-heat valves located on the outside of platforms.

46. Stepping from one car to another, after cut has been made between them, is prohibited.

47. When cutting cars, the car to be cut off must be ridden and the coupler release lever operated on that car.

II. OPERATING ENGINES.

48. Tightening the lubricator glass or water-gauge glass packing nuts, when under steam pressure, is prohibited.

49. Priming injectors while crossing streets, sidewalks, bridges, or viaducts, over public highways or railroads, passing station platforms on platform side, or close to switches, is prohibited.

50. Close the valve of the water plug before removing the water spout from the manhole at the tender.

51. In case of the unexpected movement of the engine when taking on coal, water, or sand, personnel will take a position where there is no danger of being struck by the apron of the coal chute, the spout of the water plug, or the sand spout.

52. Engine must have brakes applied, cylinder cocks open, and reverse lever in center when taking coal, sand, or water from chutes, standpipes, or spouts.

53. Any apparatus used in taking coal, water, or sand will be returned to its normal position.

54. Manhole covers will be kept closed while pulling standpipe over the tender, and will be replaced before returning the standpipe to its normal position.

55. Coal will be trimmed to keep it from falling from the tender.

56. Aprons, gangways, and the running boards of engines and tenders will be kept free of coal, oil, or other material.

57. The top of the tender behind the fuel space will be kept clear.

58. Coal boards and tools must not project over the sides of, or be allowed to fall from, the tender.

59. While handling fire tools, extending them beyond the clearance line of the engine is prohibited. When this cannot be avoided, the handler must make sure that the fire tools will not come in contact with any other train, obstruction, or overhead wires.

60. Loading coal on a tender while a passenger train is passing on an adjacent track, is prohibited.

61. Standing on side steps or footboards of engines in motion, to make repairs or adjustments, is prohibited.

62. Before opening the blow-off cock, operating the air pump or the injector, opening the cylinder cocks, or reversing the valve motion, personnel working nearby must be notified.

63. When breaking coal with a pick, strike coal with the grain.

64. Hand-operated water scoops will be lowered only at designated points. Handle should be pushed back toward bulkhead and held in that position with the right hand until the scoop is raised. The arm must not be too rigid.

65. The body should be braced clear of reverse lever before unlatching or attempting to move it.

66. While manually operating the screw type reverse gear, apply power gradually in starting gear from either extreme end of the screw.

67. When stoker is operating, keep hands, feet, and other parts of the body away from the tank and upright conveyors. Personnel will not make repairs to these parts unless steam is shut off to stoker and the operating valve

is placed in the neutral position. Clean grooves for tender slide plates before attempting to move them.

68. Operating injector, without knowing that the sprinkling hose valve is closed, is prohibited.

69. Throwing ashes, clinkers, slate, etc., from moving engines is prohibited. When removing such material from a standing engine, it should be properly disposed of without causing fire or injury.

70. Before shutting off the throttle, the blower must be on, or the fire door closed.

71. The engine bell must be rung—

a. When the engine is about to move.

b. When running through tunnels.

c. While approaching and passing over public crossings at grade.

d. When passing a train standing on an adjacent track.

72. Renewing headlight bulb, or repairing generator, while engine is in motion, is prohibited.

III. OPERATING HAND BRAKES.

73. Attempting to control the speed of a car, without first knowing how to operate the type of brake with which it is equipped, is prohibited.

74. Before cars are cut off, test brakes on cars which are controlled by hand brakes.

75. After testing the hand brakes, release them only enough to allow the car to run. Do not unwind all of the slack.

76. The stress on brake wheel, with or without standard brake club, will be toward the car rather than away from it, when conditions permit.

77. When applying brakes, apply force on club or wheel steadily and never with a jerk.

78. Stop the circular movement on the club or wheel at the time of impact with the cars ahead, or with the cars from the rear.

IV. OPERATING SWITCHES.

79. Keep clear of the line of the lever, and have the fingers and thumb under the lever when releasing it from keeper.

V. BOARDING OR ALIGHTING FROM ENGINES OR CARS.

80. Getting on or off moving equipment, except when necessary in performance of duty, is prohibited.

81. Get on or off equipment from the side of a car or train away from the main track or close clearances, when conditions permit.

82. Getting on or off engines and cars without using steps, ladders, and hand holds provided, is prohibited.

83. When necessary to board moving equipment, face the direction in which it is moving.

VI. RIDING ENGINES, CARS, OR TRAINS.

84. Personnel will not stand or sit on the roof of a box car, or on the side of a hopper or a gondola car, or stand on top of a car near the end, except when operating hand brakes.

85. Personnel will not ride on pilot, pilot beam, forward step, gangway, gangway steps of a locomotive, side of engine, or on the footboard between the engine and cars, except when necessary in the performance of duty.

86. Personnel will not make a flying or running switch with occupied passenger, camp, or caboose cars, or couple to such cars in a manner that might cause injury to the occupants.

MAINTENANCE-OF-WAY PERSONNEL

87. When a detail is working on a track, a watchman must be stationed nearby where he can see the approaching trains and warn the men, with a whistle, sufficiently in advance to allow them to get into the clear.

88. When ties, rail, and other heavy material are being handled, a specific working plan must be followed.

89. Personnel will avoid stepping on surfaces covered with grease, oil, wet paint, or other substances that might cause slippage.

90. Personnel will avoid rubbing any part of the body with the hands while handling creosoted material.

91. Gasoline, kerosene, or other inflammable liquids will not be placed in refuse cans.

92. Broken window glass will not be knocked from the sash but will be removed carefully by hand and deposited inside the building.

93. Trucks, track cars, or tractors will not be refueled while the engine is running.

94. Holes that are dug near tracks, must be filled before dark, when possible. When this cannot be done, they must be properly protected.

95. When a detail is working in, or near the end of a tunnel, personnel will stand clear of all tracks when a train approaches. Personnel not able to leave a tunnel will occupy the manholes. Tools or material will not be stored in any part of a tunnel.

96. Personnel will keep away from switch stands at facing point switches while trains are approaching and passing.

97. Unauthorized personnel will not operate hand or track cars, velocipedes, or other such means of conveyance.

98. Material will not be distributed near any live yard track until immediate usage of material is assured. Material must be placed at a safe distance from the tracks. Guards must be placed when and where necessary.

99. Track jacks will not be placed between the rails without proper authority and flag protection.

100. Nails and track spikes must be well started before striking a full blow.

101. Personnel will not measure the height of wires and poles with a wire, wet rope, steel tape line, cloth tape line containing metallic reinforcements, or with any similar material known to conduct electricity.

MAINTENANCE-OF-EQUIPMENT PERSONNEL

102. Personnel will report to foreman in charge, any defects in guards, or the absence of a guard, on any machine or appliance required to have guards. Machine or appliance will not be operated unless guards are in place. Guards must not be removed except for purposes of repairs, and then only by the foreman in charge.

103. When jacking against metal parts, insert a block of wood at contact points. Set jack securely before using it. Remove the handle when a jack is not being operated.

104. Secure the truck at the opposite end by blocking the front and back before jacking up car, locomotive, or tender.

105. Place trestles or blocks under cars, locomotives, or tenders that are jacked up, upon which work is to be done. Personnel will not go under or work on cars or tenders that are jacked up, unless the same are trestled or blocked.

106. Protection must be arranged for each assigned car repair track before personnel work on such track. Personnel will not work on cars on assigned repair tracks unless switches are locked.

107. Personnel will arrange for protection before going between or under locomotives or cars on other than assigned repair tracks.

108. Tools, ladders, ropes, tackle, scaffold, and other appliances must be inspected before they are used.

109. Personnel will remove boards with protruding nails and clean up refuse material, promptly.

110. Proper protection will be used to prevent rivet heads, bolts, chips, or other material from flying.

111. Personnel will not guide center pins with their hands when lowering cars or tender bodies onto trucks.

112. Tools or materials will not be left unsecured on tops of cabs, boilers, running boards of locomotives, tops of cars, sills, scaffolds, etc.

113. Personnel will not repair or tighten tubes, flues, firebox sheets, washout plugs, or other boiler fittings, while boilers are under steam pressure, except for authorized caulking.

114. No work will be performed on a locomotive under steam, or being fired up, which may result in injury from a movement of a locomotive, before the following precautionary measures are taken:

a. The throttle and lubricator must be shut off tight.

b. The cylinder cocks must be opened and remain open.

c. The reverse gear must be placed in a central position.

d. The hand brakes must be applied on the tender.

115. No work will be performed on a locomotive under steam, or being fired up, which involves the disconnecting of the piston from crossheads, the disconnecting of the front end of the main rod from crosshead, or the disconnecting of the back end of main rod, unless the following additional precautionary measures are taken on the side on which the work is to be done:

a. Locomotives equipped with *Stephenson valve gear:*

(1) The top rocker-arm bolt must be removed and the valve placed in the center position.

(2) The indicator plugs must be removed from the cylinder, if so equipped.

b. Locomotives equipped with *Southern* or *Baker valve gear:*

(1) The peep-hole plugs must be removed.

(2) The pin in the back end of the valve rod must be removed.

(3) The piston valve must be moved to the extreme forward position.

(4) After the work necessitating these precautions has been completed, the valve rod should be connected and, *lastly*, the peep-hole plugs applied.

c. Locomotives equipped with *Walschaert valve gear* and *not* equipped with *snifting valve:*

(1) The peep-hole plugs must be removed.

(2) The lap-and-lead lever must be disconnected at both the top and bottom ends of the lever.

(3) The piston valve must be moved to the extreme forward position.

(4) After the work necessitating these precautions has been completed, the lap-and-lead lever should be connected at both the top and bottom ends and, *lastly*, the peep-hole plugs applied.

d. Locomotives equipped with *Walschaert valve gear* and *snifting valves.*

(1) The snifting valves must be blocked open.

(2) When snifting valve is blocked open, a piece of sheet metal, equal in area to the face of the snifting valve, must be attached to deflect any escaping steam.

(3) After the work necessitating these precautions has been completed, the snifting valve must be immediately returned to its normal position to avoid accidents from steam blowing through the snifting valve, should the throttle be open.

116. Personnel will not use fingers to align holes.

117. While using hand tools, personnel will *not*—

a. Use a file as a wedge or pry bar, strike a file with a hammer, or use it without handle.

b. Leave tools or materials on window sills, ladders, cars, locomotives, or elsewhere, where they may fall or be jarred off.

c. Leave tools, materials, etc., standing on end or leaning against walls, locomotives, cars, etc., where there is danger in front of or within swing of sledges.

d. Stand in front of or within swing of sledges, hammers, hatchets, adzes, axes, bars, or other tools or repair implements.

e. Stand on the same side of a man using a sledge.

118. While operating machinery, personnel will *not*—

a. Wear loose or torn clothing, or gloves, except where the latter are required in the handling of rough material.

b. Stand or climb on motors, machinery, or guard rails to reach an object.

c. Shift a moving belt by hand.

d. Remove guards, except for purpose of repair, and then only with consent of the foreman in charge.

e. Repair, clean, or oil machinery in motion. (NOTE.—Exceptions to this rule may be authorized by the foreman in charge, but only when safe.)

f. Change gears on a lathe in motion, unless machine is constructed to permit it.

g. Remove chips by hand from moving drills or other moving tools.

h. Grind on the side of an emery wheel. The tool rest must not be more than one-quarter of an inch from the stone.

i. Perform machine work on material without securing it properly.

j. Leave unsecured materials, tools, etc., on the table, or plate of the machines while in operation.

k. Jump on or off the elevators while they are in motion.

119. Personnel will not use tools or appliances, or touch machinery or belts, until properly instructed as to their use and care.

120. Locomotives will not be moved without proper authority.

121. Personnel will not walk in front of unmounted wheels when rolling them.

122. Personnel will clean up all waste, garbage, water bottles, refuse, or other material.

123. Water will not be thrown on molten metal.

124. Chains, iron, or other materials will not be heated by dipping them in molten metal.

125. Personnel will not stand close to and/or watch forging operations, when not actually engaged in such work.

126. Personnel will not pass, or stand under, or stand in the path of a loaded crane, derrick, or hoist, except when wheeling cars or locomotives.

127. The operator will not leave a crane, derrick, or hoist, with the load suspended.

128. Personnel will not ride or hang on hook or load being handled by crane, derrick, or hoist, except when necessary in the performance of duty.

129. Personnel will push mounted wheels at the center of the axle when practicable.

130. Personnel will not use any wrench, other than a ratchet or self-adjusting car wrench, when opening or closing the doors of the drop-bottom or hopper car.

131. Tenders will not be overloaded with coal.

132. The valve key on an acetylene cylinder will not be removed while it is in use.

133. The pressure on regulators will not be changed or adjusted with the torch valves closed.

134. A gas welding or cutting torch will not be operated at a pressure in excess of the prescribed maximum.

LINEMEN AND SIGNAL PERSONNEL AND PERSONNEL WORKING IN ELECTRIC TERRITORY

135. Personnel will not touch an electrified third rail, trolley, or transmission wire, with any part of the body, tools, or other equipment. A dry piece of wood, or other nonconductor, will be used to dislodge any object from the third rail. Every precaution will be taken to avoid making a contact between the third rail and the ground. Trolley and transmission wires must be deenergized and grounded before handling.

136. Personnel will not work on power lines carrying more than 440 volts, except in cases of extreme emergency, and then only with proper protection.

137. Personnel will not touch dynamos, generators, switchboards, or other electrical appliances and/or wires appurtenant thereto, unless duly authorized.

138. Personnel will not connect or disconnect the bus line jumper cables between the electric cars when all of the cars in the train, or draft, are neither in contact with, nor entirely disconnected from the third rail, or trolley, without first opening the compressor, lighting, and heating switches on cars not making contact.

139. Broken power wires will not be handled without proper protection.

140. Personnel will not use water to smother electric flames, but will use sand, dry earth, or an approved type of extinguisher.

141. Personnel will not stand with hands behind back or with back toward a generator or switchboard.

142. Personnel will not play water on a third rail or an electric wire.

143. Personnel will not stand under those working overhead. When necessary to work beneath other personnel, those working overhead must be notified. In order to prevent injury to persons below, the overhead men must secure, or keep in proper receptacles, all tools and materials not in use.

144. Personnel will thoroughly inspect poles and guy wires before climbing poles.

145. When working on a wire or messenger strand on a line carrying, or crossing over, supply conductors, personnel will take every precaution to prevent such wire or messenger strand from coming in contact with supply wires. It may be advisable to effectively ground the wire or strand while such work is being performed. Such wires or strands should be handled with a drop rope without metallic reinforcing; and where wires are likely to break and fall, a rope basket must be used.

146. Work in wet weather should be avoided whenever possible.

147. Personnel will not contact metallic feed-in reels, if possible, unless rubber gloves with the proper leather protectors are worn.

148. During the pulling in of a length of wire or strands, personnel on the pole should avoid touching it until it has been pulled up with sufficient tension to preclude the possibility of its coming into contact with any energized wire.

STATION AND STORES PERSONNEL

149. In the operation of hand and power-propelled trucks and tractors, personnel will—

a. Operate only when qualified to do so.

b. Test brakes and alarm at each start of duty.

c. Test limit switches on trucks equipped with hoists, at each start of duty.

d. Immediately remove loaded or unloaded trucks and tractors to safe clearance from the side of a train. When not in use on station platform, trucks must be properly secured and safely parked parallel with tracks, with handles hooked up.

e. Remove operating lever when loading or unloading, when truck is on elevator, or when operator is not on truck.

f. Load vehicle safely; do not overload.

g. Not speed, drive recklessly, or otherwise operate carelessly.

h. Use care when rounding corners, passing doorways and congested places. Trucks will not be driven close to persons working or walking, if it is possible to do otherwise. An alarm should be sounded in all cases.

i. Hang a red flag or cloth on the end of any piece of material which extends beyond the length of the vehicle.

j. Look in both directions before driving across tracks, being cautious not to drive in front of a moving train, locomotive, or cars.

k. Avoid the bumping of a door with the vehicle.

l. Not reverse gears before a vehicle has come to a complete stop, except to avoid an accident.

m. Operate motor trucks from the trailing end.

n. Be certain that the elevator has stopped before running the vehicle on or off it.

o. Not use defective equipment.

p. Pull and not push hand trucks and wagons when practicable.

150. Personnel will move a sufficient distance from the tracks, all freight, baggage, and other shipments, to be loaded on, or which have been unloaded from, trains or cars.

151. Personnel will exercise caution in opening and closing car doors.

152. Cars will not be loaded or unloaded while they are in motion.

153. Material will be piled and stored safely. Refuse material should be removed promptly.

154. Personnel will secure transfer plates, gangplanks, and skids before using them.

155. Aisles and walk-ways will be kept clear at all times.

156. Personnel will be cautious in handling loaded or empty carboys. Before they are handled, it should be made certain that stoppers and tops are secure, and that carboys are not damaged or leaking.

157. Personnel will not throw material from cars, locomotives, buildings, or other similar equipment or structure.

158. While handling gas cylinders personnel will—

a. Be cautious when handling whether loaded or empty.

b. Not place them near furnaces, steam pipes, or other sources of heat.

c. Not lift or transport them by crane, derrick, or hoist.

d. Close all openings when not in use.

e. Not store leaking gas cylinders, but will remove them to open air, clear of any inflammable material or anything that will cause them to ignite.

f. Not allow open flames or smoking, nor smoke in a gas storage building.

g. Will not use a leaking hose or connection on them.